REMARKS

Reconsideration of the above-identified patent application in view of the present amendment is respectfully requested.

The Office Action of June 9, 2003 rejected claims 1-4, 10, 14, 17, and 22 as anticipated under 35 U.S.C. §102(e) by Ross, U.S. Patent No. 5,884,203. The Office Action also rejected claims 1-22 under 35 U.S.C. §103 as obvious over Thompson et al., U.S. Patent No. 6,020,812, in view of Feldmaier, U.S. Patent No. 4,842,301. These rejections are respectfully traversed.

With regard to the rejection of claims 1-4, 10, 14, 17, and 22 as anticipated by Ross, it is respectfully suggested that Ross fails to teach or suggest a crash signal from a crash sensor and a safing signal from an acoustic safing sensor, both of which separately indicate the occurrence of a deployment crash event. Ross teaches that microprocessor 22 controls deployment of an air bag based upon a signal from a high frequency pressure transducer 16 indicating crash severity and a signal from a low frequency accelerometer circuit 12 indicating crash direction. (Ross, Col. 2, lines 50-55 and Col. 4, line 49-Col. 5, line 6). Ross fails to teach or suggest that the signal from the high frequency pressure transducer 16 and the signal from the low frequency accelerometer circuit 12 are both separately

indicative of the occurrence of a deployment crash event. To the contrary, Ross specifically teaches that the microprocessor 22, by using the high frequency signal to determine severity and the low frequency signal to determine direction, makes a determination to activate the air bag quicker than if the accelerometer circuit 12 was used to provide an indication of crash severity. (Ross, Col. 5, lines 3-6). Since the microprocessor 22 of Ross determines to activate the air bag without crash severity information from the accelerometer circuit 12, the signal from the accelerometer circuit 12 is not indicative of the occurrence of a deployment crash event. Instead, the signal from the accelerometer circuit 12 is only indicative of a direction of deceleration. Since Ross fails to teach or suggest each feature of claims 1-4, 10, 14, 17, and 22, it is respectfully suggested that the rejection is improper and should be withdrawn.

Moreover, Ross fails to teach or suggest an acoustic safing sensor. The term "safing sensor" is a term of art that identifies a sensor that operates separately and independently from a vehicle discrimination crash sensor to determine the occurrence of a deployment crash event. When a safing sensor is used in a deployment algorithm, the air bag will not be actuated until both a discrimination crash sensor and the safing sensor separately and independently

determine that a deployment crash event has occurred. The passenger restraint system 10 of Ross does not include a safing sensor. Instead, in Ross, the accelerometer circuit 12 and the high frequency pressure transducers 16 of Ross are used in combination to form a discrimination crash sensor. Since Ross fails to teach or suggest an acoustic safing sensor, it is respectfully suggested that the rejection of claims 1-4, 10, 14, 17, and 22 is improper and should be withdrawn.

With regard to the rejection of claims 1-22 as obvious over Thompson et al. in view of Feldmaier, it is respectfully suggested that neither Thompson et al. nor Feldmaier teaches or suggests a controller which controls actuation of an occupant protection device in response to both a signal from a crash sensor and a signal from a safing sensor separately indicating the occurrence of a deployment crash event. Thompson et al. discloses accelerometers 48 and side crush tubes 50 (reference numbers 16a-d of Thompson et al. are occupant position sensors and are not crush zone sensors). Thompson et al. provides no details as to how an electronic control module 180 determines the occurrence of a deployment crash event. Thompson et al. merely states that the electronic control module 180 uses signals from one or more crash sensors to control activation of safety restraint devices. (Thompson et al., Col. 3, lines 48-56).

Therefore, it is respectfully suggested that Thompson et al. fails to teach or suggest a controller that controls actuation of an occupant protection device in response to both a signal from a crash sensor and a signal from a safing sensor separately indicating the occurrence of a deployment crash event.

Feldmaier also fails to teach or suggest this feature of the claims. Feldmaier teaches acoustic sensors 15 and 16 located on side rails 11 and 12, respectively, of a vehicle body 10. Feldmaier also teaches a signal processing apparatus 17 for actuating a passive restraint in response to a signal from either one of the acoustic sensors 15 or 16. Since a combination of Thompson et al. and Feldmaier fails to teach or suggest each feature of the claims, it is respectfully suggested that the rejection of the claims as obvious over Thompson et al. in view of Feldmaier is improper and should be withdrawn.

Furthermore, neither Thompson et al. nor Feldmaier teaches or suggests the use of a safing sensor. Since neither Thompson et al. nor Feldmaier teaches or suggests a safing sensor, the rejection of the claims as obvious over Thompson et al. in view of Feldmaier is improper and should be withdrawn.

It is also respectfully suggested that there is no suggestion or motivation to combine the teachings of Thompson

et al. and Feldmaier. Thompson et al. is directed toward a system for sensing the position of the occupant in a vehicle while Feldmaier is directed toward sensing acoustics during vehicle deformation. The Office Action states as motivation for the combination that the acoustic sensor of Feldmaier will "increase the accuracy and efficiency of the occupant protection system" of Thompson et al. Neither Thompson et al. nor Feldmaier teaches or suggests that the accuracy and efficiency of an occupant protection system will be increased using the acoustic sensors. Thus, such statement must be based upon personal knowledge of the Examiner. Thirty-seven C.F.R. §1.04(d)(2) states that:

> When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.

Applicant, at this time and pursuant to 37 C.F.R. §1.104(d)(2), requests an affidavit of the Examiner to support the Examiner's statement that the acoustic sensor of Feldmaier will increase the accuracy and efficiency of the system of Thompson et al.

Further with regard to the obviousness rejection over Thompson et al. in view of Feldmaier, claims 3 and 9 recite a sensor module that includes an accelerometer and an acoustic sensor. Neither Thompson et al. nor Feldmaier

teaches or suggest such a module. Feldmaier specifically teaches locating the acoustic sensors 15 and 16 on opposite side rails of the vehicle body near the front of the vehicle. Therefore, the rejection of claims 3 and 9 is improper and should be withdrawn.

Claim 6 recites a front crush zone sensor located in a forward part of the vehicle. Neither Thompson et al. nor Feldmaier teaches or suggests a front crush zone sensor. Therefore, the rejection of claim 6 is improper and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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